

Feral Hog Management Plan

Decision Documents

For

**Cameron Prairie National Wildlife Refuge
November 2012**

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FERAL HOG MANAGEMENT PLAN
UNITED STATES FISH AND WILDLIFE SERVICE
Southwest Louisiana National Wildlife Refuge Complex

November 2012

Recommended by _____ Date: _____
Refuge Manager

Reviewed by _____ Date: _____
Refuge Supervisor

Concurrence by _____ Date: _____
Regional Chief, NWRS

Approved: _____ Date: _____
Regional Director

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I. INTRODUCTION

During 2005 the U S Fish and Wildlife Service (USFWS) completed the Cameron Prairie National Wildlife Refuge (CPNWR) Comprehensive Conservation Plan and Environmental Assessment (CPCCP). The CPCCP took nearly 5 years to complete and went through an extensive public scoping and public comment process. The CPCCP address the need to control invasive species through an animal control plan. This effort will begin to bring the USFWS into compliance with the CPCCP and provide the tools needed to begin aggressive control efforts.

The refuge is located in Cameron Parish which is situated in the extreme southwest corner of Louisiana (See Figure 1). CPNWR established in 1988 is a vital link in the National Wildlife Refuge System. CPNWR is located about 25 miles southeast of Lake Charles, Louisiana, in north central Cameron Parish (county). The 9,621-acre Refuge and the 14,927 acre East Cove Unit (part of the multi-agency Cameron Creole Watershed Project), contains fresh, intermediate & brackish marshes; coastal prairie; and moist soil units and is managed to preserve and protect wintering waterfowl and their habitat. It is located four miles west of Lacassine National Wildlife Refuge, and is bordered on the north and west by private land. The Gulf-Intracoastal Waterway forms the southern boundary of the unit, while North Canal forms the eastern boundary (USFWS 2005).

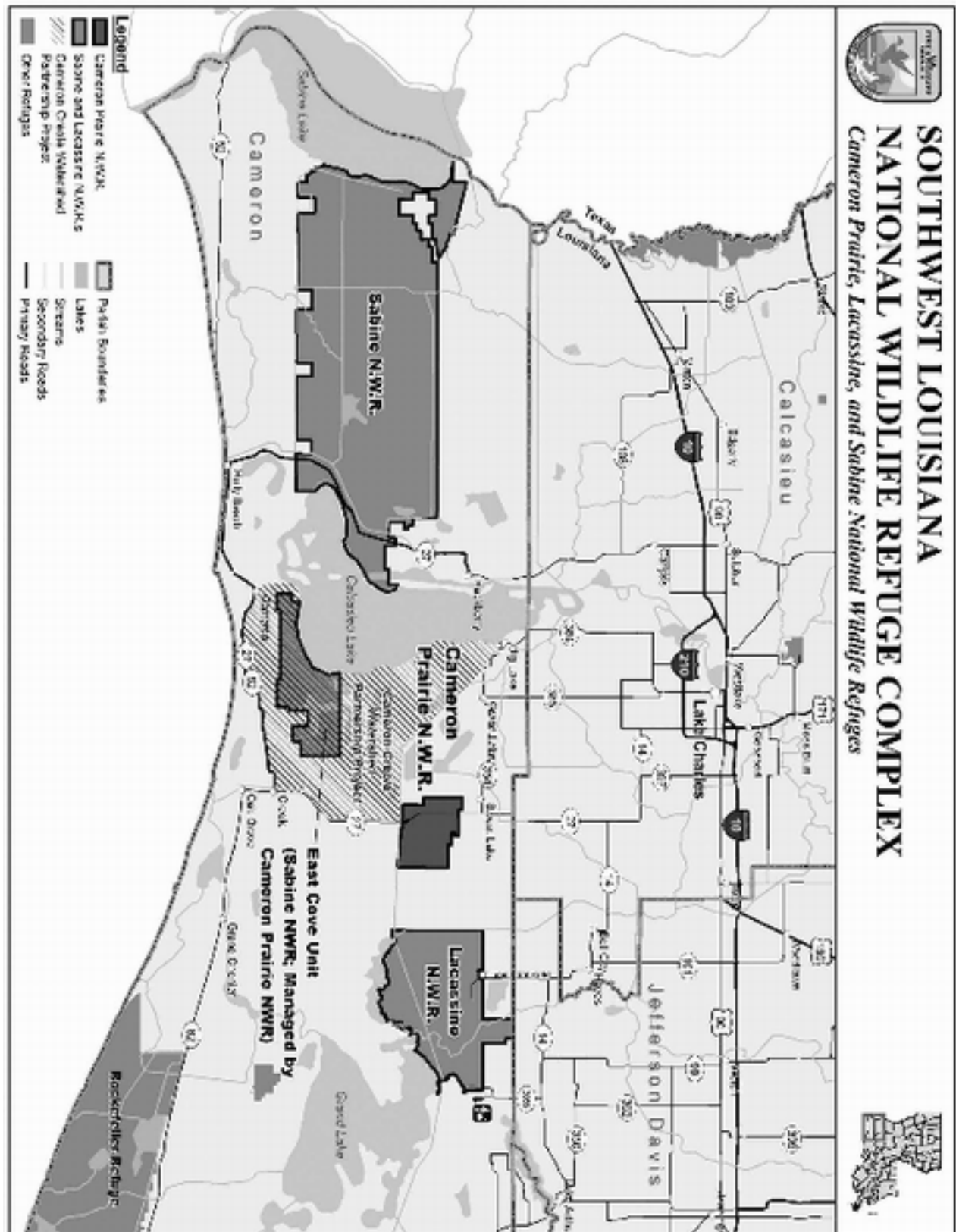
The refuge is a primary link in the chain of refuges making up the National Wildlife Refuge System. It is a terminus for migratory waterfowl of both the Mississippi and Central Flyways and is an important wintering site for lesser snow geese, gadwall, green-winged teal, widgeon, and pintail. Other wildlife of major importance found on the refuge includes the American Alligator and numerous species of wading, water, and marsh birds.

The primary management objective of CPNWR is to provide the highest quality wintering waterfowl habitat possible, allow compatible public uses, such as hunting, fishing, environmental education, wildlife observation, and photography, promote research on marsh and aquatic wildlife, and provide for the needs of any endangered plants and animals.

Wetlands are maintained using prescribed burning, water level manipulation and mechanical means. CPNWR has numerous miles of canals and levees with associated water control structures. CPNWR is an integral part of a national scenic byway which is the Creole Nature Trail All-American Road and is visited by more than 250,000 people annually. The Refuge's Visitor Center, youth/senior waterfowl hunting opportunities, wildlife drive and boardwalk at CPNWR are considered one of the principal visitor attractions in southwest Louisiana.

Cameron Prairie is located in the transition zone between higher agricultural land and the coastal marshes, and contains species from both habitat types. The Refuge is predominantly freshwater marsh and has a high plant and animal species diversity due to its many different elevations and water depths. Cameron Prairie's marshes provide valuable habitat for resident and migratory populations of ducks, geese, shorebirds and wading birds. Alligators (*Alligator mississippiensis*) are often seen sunning along the wildlife drive and in the canals adjacent to Louisiana State Highway 27 (SH 27). Its moist prairies are home to songbirds, Northern bobwhite quail (*Colinus virginianus*), mourning doves (*Zenaida macroura*), and white-tailed deer (*Odocoileus virginianus*). Every winter, the Refuge welcomes thousands of waterfowl escaping frozen northern breeding grounds.

Figure 1 – Cameron Prairie NWR Location map.



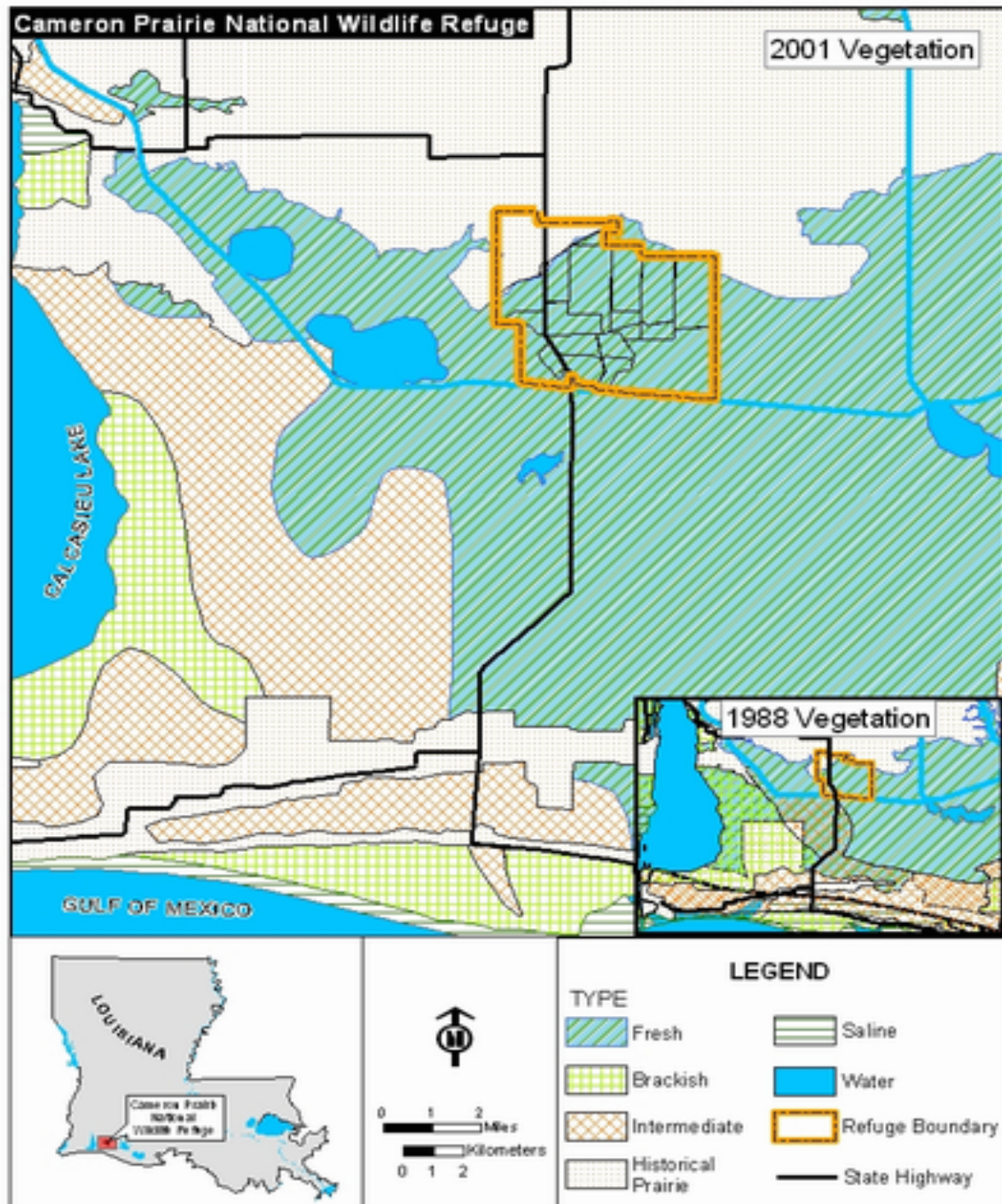


Figure 2. Vegetation of CPNWR

II. CONFORMANCE WITH STATUTORY AUTHORITY

The U.S. Fish and Wildlife Service maintains the policy of managing feral animals on refuges where it is compatible with the purposes for which the refuge was established. The following

laws, regulations, and Executive Orders relate to the management of feral animals on Federal lands:

1. The National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, permits the uses of refuges provided that the proposed use is compatible with the primary purpose for which a refuge was established.
2. The Refuge Recreation Act of 1962, as amended, authorizes public hunting on refuges where the hunting program is compatible with the other major purposes for which the area was established.
3. The Fish and Wildlife Act of 1956, as amended, authorizes development, advancement, management, conservation, and protection of fish and wildlife resources.
4. Executive Order 12996, "Management and General Public Use of the National Wildlife Refuge System" recognizes compatible wildlife-dependent recreational activities involving hunting, among others, as priority general public uses of the National Wildlife Refuge System.
5. Title 50 CFR, Section 31.2 lists hunting as a method of surplus wildlife population control.
6. Title 50 CFR, Part 31, Section 14: (a) Animal species which are surplus or detrimental to the management program of a wildlife area may be taken in accordance with federal and state laws and regulations by federal or state personnel or by permit issued to private individuals. (b) Animal species which damage or destroy federal property within a wildlife refuge area may be taken or destroyed by federal personnel.
7. Title 50 CFR, Part 30, Section 11 (a) states that feral animals, including horses, burros, cattle, swine, sheep, goats, reindeer, dogs, and cats, without ownership that have reverted to the wild from a domestic state may be taken by authorized federal or state personnel or by private persons operating under permit in accordance with applicable provisions of federal or state law or regulation.
8. Executive Order 13112 (Federal Register/ Vol. 64 No. 25 / Monday, Feb. 8, 1999/ Presidential Documents 6183) states in Sec. 2. Federal Agency Duties. that we should; (i) detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner; (ii) monitor invasive species populations accurately and reliably; (iii) provide for restoration of native species and habitat conditions in ecosystems that have been invaded; (iv) conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species.

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9. Title 50 CFR 32.1 states that the opening of a wildlife refuge area to hunting will be dependent upon the provisions of law applicable to the area and upon a determination by the Secretary of the Interior that the opening of the area to hunting of migratory game birds, upland game, or big game will be compatible with the principles of sound wildlife management and will otherwise be in the public interest.
 10. Title 50 CFR 32.2 provides provisions which apply to each person while engaged in public hunting on a wildlife refuge.

The purposes of CPNWR are:

Cameron Prairie National Wildlife Refuge was established “... *for use as an inviolate sanctuary, or for any other management purpose, for migratory birds*” (16 U.S.C. 715d (Migratory Bird Conservation Act)).

The mission of the U.S. Fish & Wildlife Service is:

“...working with others to conserve, protect, and enhance fish and wildlife and their habitats for the continuing benefit of the American people.”

In addition to the overall mission of the Service, the National Wildlife Refuge System also has its own mission as set forth by congress in the National Wildlife Refuge System Improvement Act of 1997. It is as follows:

“...to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”

III. STATEMENT OF OBJECTIVES

The management goals for CPNWR are to (USFWS 2005)

Provide the highest quality wintering waterfowl habitat possible.

- Allow compatible public uses, such as hunting, fishing, environmental education, wildlife observation, and photography.
- Promote research on marsh and aquatic wildlife (USFWS 2002).
- Provide for the needs of any endangered plants and animals.

Program Objective and Strategies

Objective

Intensively control feral hog populations by 95% to aid in achieving habitat management goals identified in the CPCCP.

Discussion

The purpose of controlling feral hogs is to protect 24,548 acres of fresh, intermediate & brackish marshes; coastal prairie; and moist soil units from feral hog (*Sus scrofa*) induced habitat destruction, impacting mottled ducks, other native species and avian nesting mortality. Currently and in past years, feral hogs have roamed at large on private property adjacent to CPNWR and have gone unchecked and unmanaged. The rapidly expanding distribution of feral hogs in the United States has caused great concern for many land and resource managers (See Figure 1 in the CPNWR Feral Hog Management Plan Environmental Assessment). The ecologically-rich wetlands of CPNWR have not been immune to the invasion of these animals. cursory observations suggest accelerated increases over the last few years. Feral hogs are omnivores devouring flora and fauna alike.

Habitat throughout CPNWR, has been compromised because of extensive rooting (foraging for food) by feral hogs. Since 2010, feral hog sightings have been primarily reported on the western side of CPNWR. The area of concern is primarily moist soil management units and un-impounded fresh marsh. Since, CPNWR was established in 1988 “... *for use as an inviolate sanctuary, or for any other management purpose, for migratory birds*” (16 U.S.C. 715d (Migratory Bird Conservation Act)) controlling the feral hog population throughout the Refuge should be a priority. Authority to control wildlife populations for management is governed by title 50 CFR, Part 31, Section 14:

Strategies:

- 1) Initial Treatment - Aerial gunning (from a helicopter) operations conducted by USDA Wildlife Services (WS) as requested by USFWS personnel;
- 2) Secondary tool- Public hunting regulated by Special Use Permit;
- 3) Secondary tool -Ground shooting near feeders by USFWS personnel and/or USDA (WS) ;
- 4) Secondary tool - Corral trapping conducted by USFWS personnel and/or USDA (WS), followed by on-site euthanasia.

IV. ASSESSMENT

1. Compatibility with Refuge Objectives

The strategies identified to aid in the control of feral hogs are consistent with the goals and objectives associated with the CPCCP Habitat Goals and Undesirable Animals Objectives and Strategies.

2. Biological Soundness

The purpose of controlling feral hogs is to protect 24,548 acres of fresh, intermediate and brackish refuge marshes; coastal prairie; and moist soil units from feral hog (*Sus scrofa*) induced habitat destruction, impacting mottled ducks, other native species and avian nesting mortality. Currently and in past years, feral hogs have roamed at large on private property adjacent to CPNWR and have gone unchecked and unmanaged. The rapidly expanding distribution of feral hogs in the United States has caused great concern for many land and resource managers. The ecologically-rich marshes of CPNWR have not been immune to the invasion of these animals. cursory observations suggest accelerated increases over the last few years. Feral hogs are omnivores devouring flora and fauna alike.

According to the Louisiana State University Agricultural Center, feral hog populations are growing and expanding in the state and throughout the southeastern states. Hogs are becoming one of the most serious concerns for wildlife managers. They root up food plots, eat the corn at feeders, tear up hardwood stands looking for acorns, and scare other wildlife away. Hogs also prey on young wildlife, compete with wildlife, carry diseases and pollute streams. Feral hogs damage forest regeneration and other agricultural crops like sugarcane, corn and rice (LSU AgCenter).

Feral hogs are a result of domestic hogs that have been released or a hybrid of domestic hogs and introduced Russian boars. Feral hogs are adaptable to a wide range of habitats -- from piney woods to bottomland hardwoods and even marshlands. Their average size is 100 to 150 pounds, but they can reach over 400 pounds.

Feral hogs are the most prolific exotic mammal in North America with the population able to double in four months. Sows breed throughout the year or seasonally beginning at eight to 10 months of age. They can produce two litters every 12 to 18 months with an average of four to eight piglets per litter. Older sows may have litters of 10 to 13.

Feral hogs carry many diseases that can transmit to humans. Brucellosis is the most dangerous but also the most preventable disease. The disease causes Undulant Fever in humans, which can result in fever, orchitis or oophoritis. Treatment can last for months, and the problems can re-occur at any time. The disease is contracted when butchering or handling the meat of feral hogs. The simple solution is to wear rubber or latex gloves when processing a hog or handling uncooked meat. Properly cooked meat is safe to eat (LSU AgCenter). Additionally people butchering feral hogs should wear eye protection and avoid eating, drinking, or using tobacco products which could potentially result in oral contamination with bacteria-laden blood or bodily fluids.

Many biologists and wildlife managers recommended trapping or shooting as the best control methods. Feral hogs are considered unregulated quadrupeds in Louisiana. They can be shot by anyone with a legal hunting license during legal daylight shooting hours year-round.

3. Economic Feasibility

Annual administration costs associated with the Hog Control Program include salary, equipment, contract support with USDA Wildlife Services, hunt area boundary and sign maintenance, fuel, etc. A cost of approximately \$70K will be required once every 5 years for initial and potential follow up control operations using USDA Wildlife Services. After action follow-up tools will be implemented as appropriate. It is anticipated that normal operations using follow-up tools would cost approximately \$40K per year during any given year after initial treatment is performed. When public hunting is used hunts will be administered by refuge personnel and partners such as the LDWF. It is anticipated that existing funding sources available to the Southwest Louisiana National Wildlife Refuge Complex are adequate to implement this plan.

4. Relationship with other Refuge Programs

The proposed program will not cause any major conflicts with non-consumptive users. All control operations will be conducted during low public use periods. Non-consumptive users on the refuge during control operations are generally relegated to public areas in the vicinity of the boat launches along the state highway that passes through the refuge.

5. Recreational Opportunity

The nature and access of CPNWR dictates that much of the area will be under-utilized as compared to other areas its size when the public hunting tool is used as a control measure. Several factors contribute to this situation. Foremost, the refuge and its hog control areas are primarily marshes with varying water levels. Marsh conditions make access very challenging and sometimes difficult. The organic layers associated with the marsh makes accessing the control areas on foot very difficult. Although numerous levees are found on the refuge, much of the refuge is difficult to access and traverse.

V. DESCRIPTION OF FERAL HOG MANAGEMENT PROGRAM

Aerial Gunning: Aerial gunning accounted for over thirty-five percent of the feral hogs taken by the USDA Wildlife Service during a 1998 field investigation (TWDMS Annual Report, 1998). In Texas, helicopters are the primary aircraft used for aerial control of feral hogs. This is a very selective method and depredation problems can be stopped quickly. Large numbers of feral hogs can be taken in a single aerial control operation (Mapston 1997).

During October, 2007, an experimental project was initiated by Southwest Louisiana NWR Complex/WS (Wildlife Services, USDA) focused on feral swine removal from Sabine National Wildlife Refuge. Methods authorized for this project included corral traps, snares, night shooting, ground shooting near feeders, and aerial hunting via a helicopter owned by WS. WS also collected blood serum from some of the collected animals in support of a national disease surveillance program for classical swine fever (CSF), swine brucellosis (SW), and pseudorabies (PRB). A total of 223 hogs were taken from October 2007 through September 2008. Fourteen feral swine were tested for Classical Swine Fever (CSF), Swine Brucellosis (SB), and Pseudorabies (PRV). Of these samples six tested positive for PRV; and all tested negative for both CSF and SB.

Based on the 2007 experience, limited accessibility to CPNWR and studies conducted in Texas, aerial gunning will be the first method used to immediately and significantly set back population levels which can then be controlled by other tools as needed. It is anticipated that aerial gunning may be needed once every three to five years to address the encroachment of feral hogs from adjacent private lands if follow up tools such as public hunting, professional shooting by USFWS staff or trapping is not successful. All aerial control activities will be accomplished through a cooperative agreement with USDA-Wildlife Services and performed in accordance with the Department of Interior Aerial, Capture Eradication and Tagging of Animals (ACETA) Handbook (351 DM-2-351 DM 3). USFWS personnel will not participate in this operation (see attached Environmental Assessment). A pre-treatment survey will be conducted in an effort to determine hog densities in targeted areas prior to aerial gunning. After aerial gunning the USFWS will then initiate an aerial population assessment survey. If the 95% population eradication objective is not met then the USFWS will move forward with the secondary tools identified below. If the objective is met the USFWS may still move forward with secondary measures in an effort to continue to keep hog populations at the desired level in an effort to reduce the more costly aerial gunning technique in the future.

Public Hunting: Public hunting on National Wildlife Refuges, state wildlife management areas and private lands has been a time honored method of attempting to control feral hogs throughout the United States. However, this tool usually needs to be used in conjunction with other tools to effectively reduce numbers and to achieve long term eradication of feral hogs within a given geographical area.

Hunting with dogs is an ancient control method that can be effective for feral hogs. Many factors come into play for this method to be successful. The experience of the dogs, the hunter, and the hogs are all important. There are a wide variety of opinions on the best hog dog breeds, dog characteristics, and training of hog dogs. Many different breeds and cross breeds of dogs have proven satisfactory to hunters (Littauer, 1993). Over four percent of the hogs taken in a Texas state program were taken with the use of dogs in FY 1998 (TWDMS Annual Report, 1998). A limited number of dogs may be permitted during the public hunt on the Refuge. Permittees will be granted a multi day permit during specific periods of time and during selected seasons to attempt to take as many hogs as possible during their permit period. All hogs removed from the refuge must be dead. Permittees will be selected by a drawing or other method to be decided upon yearly based on the effectiveness of the overall process.

Shooting at feeders: USFWS/WS personnel may opportunistically shoot hogs at feeders as the opportunity presents itself, however, this usually will not reduce the population to a great extent. Ground shooting might be effective if it is intensive and if the hog population is small (Texas A&M). Shooting techniques for feral hog are essentially the same as those for white-tailed deer. Stand hunting or still hunting can be conducted in baited areas or at feeders. As feral hogs are attracted to supplemental feeding sites and feeders, these can be prime areas for taking feral hogs. However, feral hogs are very intelligent and can be a challenging foe. Intensive hunting may cause feral hogs to shift their home range or become more nocturnal. When this happens, hogs can be shot at night using a spotlight with a red filter. It is recognized that extended baiting for purposes of shooting or trapping could have an unintended positive

effect on hogs by way of supplemental feeding. Care will be taken to keep baiting short-term. Bait will be removed from the targeted area after each period of time hogs are being taken by hunters or other authorized individuals.

Trapping: These devices can be used as lethal control method. Most designs are based on a basic box shape with some type of a gate door (Littauer, 1993). They may be used for single or multiple animal catches. Corrals or traps may have spring-loaded gates (Taylor, 1991), trip gates, drop gates, or hinged gates depending upon the trap-maker's preference (Littauer, 1993). The TWDMS uses a cage trap made of heavy gauge stock panels welded to a steel tubing frame to make it rigid. Four panels are wired together to make a pen if a large trap is needed. Smaller and more portable traps are made with all parts welded together making a permanent pen. The gate consists of a rectangular hinged door, hinged at the top to allow the hogs to "root" the door open and allow access into the trap. Once inside a trapped hog will generally attract others who push the gate open and enter (Littauer, 1993). Bait is needed to attract hogs to the trap. Soured grain, usually fermented corn, is highly preferred bait. Carrion can be used but is more effective in the cool season. Prebaiting the trap is important in order to achieve the maximum effectiveness of a cage trap. Letting the hogs become comfortable in and around the trap greatly increases the chance for multiple catches. The availability of natural foods may decrease attractiveness of trap baits and hence will hinder trap success. This is particularly true in the warm months of the year (Littauer, 1993).

VI. MEASURES TAKEN TO AVOID CONFLICTS WITH OTHER MANAGEMENT OBJECTIVES

A. Biological Conflicts

Refer to Decision Document Package, Environmental Assessment (attached).

B. Public Use Conflicts

Hog control operations may overlap with sport fishing and migratory bird hunting to some degree during control activities however; all efforts will be made to avoid the peak fishing and migratory bird hunting time period. The demand for non-consumptive wildlife oriented use on CPNWR is expected to be high. Conflicts between hog control personnel and non-consumptive users may occur. Restrictions on taking methods and restrictions on taking hogs near designated public use facilities, canals and trails should aid in reducing potential conflicts. Should serious conflicts arise, considerations will be given to time and space scheduling and/or zoning.

The demand for consumptive uses on CPNWR are expected to be low as in the past. While conflicts within user groups are expected to be minimal, it may occur. To mitigate potential conflicts, when the hunting tool is used, number of users will be limited through a lottery, Special Use Permit system and through time and space scheduling and/or zoning.

C. Administrative Conflicts

Staffing and funding is available to administer this program. Actions will not be encumbered with unnecessary procedures requiring funds and manpower to enforce. The only

considerations to be observed will be procedures to ensure that the resources are not damaged, that participants are assured of safety and experience a quality hunt. Presently, little labor intensive data is collected during the hunts. CPNWR wildlife and recreational management programs are administered utilizing current personnel and funds allocated to the Southwest Louisiana National Wildlife Refuge Complex. Special Use permit conditions will be made as simple as possible, if needed, in order to minimize the personnel and funding needed to administer the hunt program. Staggered tours of duty by law enforcement personnel minimize staffing shortages. Assistance may be sought from other refuges and from state personnel if serious conflicts arise.

VII. CONDUCT OF THE HOG CONTROL PROGRAM

Federal Register Publication

Not required – Hog control will be regulated through contracts and special use permits.

A. Refuge-specific Special Use Permit conditions when hunting is used as a tool

The hog management program provides for the use of four tools. The only tool requiring specific public restrictions would be the public hunting tool which will be regulated by a special use permit issued by the USFWS. The custom of Special Use permits to regulate hunting for specialized hunts is a time honored program that has been successfully implemented for alligator hunting within the Southwest Louisiana NWRC for over two decades.

An example of some of the special conditions that would be in the special use permit are as follows:

1. The *Permittee* must furnish his or her own hunting equipment prior to the hunt.
2. No alcohol may be in possession while on the refuge. No littering of any sort on National Wildlife Refuges, carry all trash and waste out.
3. Refuge managers have the authority to cancel this permit at any time. Violation of any federal, state, or refuge regulation, or special condition will result in immediate cancellation of the *Special Use Permit (SUP)*.
4. There is no size limit to any mudboats, go-devils, or outboard motors while scouting or during the hunting season; no airboats are allowed. Access will be defined by the refuge manager.
5. Boats operated before sunrise and after sunset must have proper running lights.
6. Feral hogs may not be shot from moving boat (against Louisiana state law). The motor must be off and all forward progress ceased.

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7. Each *Permittee* must personally hunt their assigned unit each morning and begin harvesting hogs at official sunrise (nighttime hunting is prohibited unless explicitly authorized by the Refuge Manager).
 8. In case of illness or injury to the *Permittee*, a designated assistant may hunt the unit for the *Permittee* with prior approval from the refuge manager.
 9. Authorized Firearms to dispatch hogs will include shotguns, muzzleloaders and center fire handguns. Extreme caution must be exercised when using firearms.
 10. Hunters will attempt to kill all hogs encountered. No “high grading” is allowed. All hogs removed from the refuge must be dead.
 11. Each *Permittee* must report the number of hogs killed and their location once there permit period expires.
 12. Each *Permittee* must remove all sets, markers, boats, trailers, or other gear within
 - a. twenty-four hours of season closure
 13. Hunters are allowed to leave a maximum of two boats with equipment on the refuge while hunting. The refuge is not responsible for theft or damage.
 14. Permittee may not sell, barter, or gain any other economic benefit from this hunt other than the sale of the alligators, taken by the *Permittee* and their approved assistants, to State authorized processors.

B. Anticipated Public Reaction to the Program

During 2005 the U S Fish and Wildlife Service completed the CPNWR Comprehensive Conservation Plan and Environmental Assessment (CPCCP). The CPCCP took nearly 5 years to complete and went through an extensive public scoping and public comment process. Feral Hog removal never surfaced as a major negative issue in the CPCCP. The Feral Hog Management Plan, Environmental Assessment and Compatibility Determination was made available for public review and comment for 30 days starting October 1, 2012 and ending November 30, 2012. A news release was sent to the media explaining how to obtain copies of the documents. The documents were posted on the internet at www.fws.gov/swlarefugecomplex and copies of the document were also available at the Refuge Headquarters site. No public comments were received. The Louisiana Department of Wildlife and Fisheries was consulted during the planning process and supported the plan.

C. Hunter Application and Registration Procedures

This is only applicable to the Public Hunting Tool when used. The management of hog hunting will occur in the same manner as the Alligator Hunting program currently managed on the refuge which is through a lottery process.

D. Media Selection for Announcing and Publicizing the Hunt

When hunting is used as a hog control tool the availability of the opportunity will be announced via a U S Fish and Wildlife Service News Release. Applications will be available via the internet at <http://www.fws.gov.swlarefugecomplex> or by contacting the Southwest Louisiana National Wildlife Refuge Complex at 337-598-2216.

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